

BATTERY-OPTIMIZED SYSTEM-ON-A-CHIP AND APPLICATIONS THEREOF

ABSTRACT OF THE DISCLOSURE

5       A battery-optimized system-on-a-chip includes multimedia module, a high-speed interface, a processing module, on-chip memory, and an on-chip DC-to-DC converter. The multimedia module operably coupled to produce rendered output data from input data received via the high-speed interface and/or from data stored in the on-chip memory. The high-speed interface is operably coupled to provide data to and from an external  
10       source. The on-chip memory is operably coupled to store at least a portion of a multimedia application, wherein the processing module processes input multimedia data in accordance with the multimedia application to produce output multimedia data. The on-chip DC-to-DC converter is operably coupled to convert a battery voltage into a supply voltage that is provided to the multimedia module, the high-speed interface, the  
15       processing module, and/or the on-chip memory.